

COPY FOR IB  
PATENT COOPERATION TREATY  
**PCT**

REC'D 29 MAR 2005



WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference EF-20859-PCT		FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/KR2003/002415</b>	International filing date (day/month/year) <b>11 NOVEMBER 2003 (11.11.2003)</b>	Priority date (day/month/year) 11 NOVEMBER 2002 (11.11.2002)	
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 C12N 15/29</b>			
Applicant  <b>KOREA CHUNGANG EDUCATIONAL FOUNDATION et al</b>			

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.  <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>1</u> sheets.
3.	This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand  <b>08 JUNE 2004 (08.06.2004)</b>	Date of completion of this report  <b>01 FEBRUARY 2005 (01.02.2005)</b>
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  <b>CHANG, Je Hwan</b>  Telephone No. 82-42-481-8158 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/002415

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

☐ the international application as originally filed

☒ the description:

pages 1-20

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

☒ the claims:

pages 22

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, as amended (together with any statement) under Article 19

pages 21, filed with the demand

pages \_\_\_\_\_, filed with the letter of 03 Jan 2005

☒ the drawings:

pages 1/12 - 12/12

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

☒ the sequence listing part of the description:

pages 1-5

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☒ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION

International application No.  
PCT/KR2003/002415

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

The documents cited in the International Search Report do not disclose relevant seed-specific expression promoter sequence set forth as SEQ ID NO.3 of the present invention.

Therefore, Claim 1 and Claim 3 of the present invention are novel and involve an inventive step. Claim 3 to Claim 11 are also novel and involve an inventive step because they are dependent claim of Claim 1 or Claim 2.

What is claimed is:

1. A seed-specific expression promoter comprising an active fragment of nucleotides 482 to 608 (-179 to -53) of SEQ ID NO: 3.
- 5 2. The seed-specific expression promoter of claim 1, which comprises the nucleotide sequence as set forth in SEQ ID NO: 3.
3. An intron for enhancement of gene expression comprising nucleotides 149 to 1722 of SEQ ID NO: 1.
- 10 4. A seed-specific expression vector comprising the promoter of claim 1 and/or the intron of claim 3.
5. The seed-specific expression vector of claim 4, which is  
15 constructed by inserting the promoter upstream of a foreign gene of a binary vector.
6. The seed-specific expression vector of claim 5, which is a  
20 pBinS/FAD2-GUS expression vector as shown in FIG. 4B.
7. The seed-specific expression vector of claim 5, which is a  
pSiW6-P2.4 expression vector as shown in FIG. 9A.
8. The seed-specific expression vector of claim 4, which is  
25 constructed by inserting the promoter upstream of a foreign gene of a transient expression vector.
9. The seed-specific expression vector of claim 8, which is a  
pSiFAD2-GUS expression vector as shown in FIG. 8A.
- 30 10. A transgenic plant transformed with the seed-specific expression vector of any one of claims 4 through 9.